YIN LIN

irenelin@umich.edu
https://niceirene.github.io/

EDUCATION

University of Michigan, Ann Arbor — Ann Arbor, MI
Ph.D. student in Computer Science and Engineering — Sept. 2019 – present
Advisor: Prof. H. V. Jagadish

Shanghai Jiao Tong University (SJTU) — Shanghai, China
B.S. in Computer Science — Sept. 2015 – June 2019

RESEARCH INTEREST

Ethics issues in Data Science and Artificial Intelligence, including data representativeness, diversity, fairness, and validity.

PUBLICATIONS

Conferences

- *On Detecting Cherry-picked Generalizations*
  Yin Lin, Brit Youngman, Yuval Moskovitch, H. V. Jagadish, Tova Milo
  (Accepted in **PVLDB** 2022)
- *Identifying Insufficient Data Coverage in Databases with Multiple Relations*
  Yin Lin, Yifan Guan, Abolfazl Asudeh, H. V. Jagadish
  PVLDB - Proceedings of the VLDB Endowment, 13(11): 2229-2242, 2020.
- *R^2-Tree: An Efficient Indexing Scheme for Data Center Networks*
  Yin Lin, Xinyi Chen, Xiaofeng Gao, Bin Yao, Guihai Chen
  DEXA - International Conference on Database and Expert Systems Applications, 2018.

Workshops

- *On Structural vs. Proximity-based Temporal Node Embeddings*
  Puja Trivedi*, Alican Büyükçakır*, Yin Lin, Yinlong Qian, Di Jin and Danai Koutra
  MLG - International Workshop on Mining and Learning with Graphs, 2020.
- *MithraDetective: A System for Cherry-picked Trendlines Detection*
  Yoko Nagafuchi, Yin Lin, Kaushal Mamgain, Abolfazl Asudeh, HV Jagadish, You (Will) Wu, Cong Yu
  CoRR, 2020, arXiv/2010.08807

RESEARCH EXPERIENCES

On Detecting Cherry-picked Generalizations — June. 2020 – Apr. 2021
University of Michigan – Advisor: Prof. H. V. Jagadish, Collaborator: Prof. Tova Milo

- *Goal: To detect misleading statements given by cherry-picked generalization levels.*
- Presented a scoring framework to indicate the appropriateness of the generalizations.
- Formulated practical explanation tasks to disclose significant counterexamples and provide better alternatives to the statement

Identifying Insufficient Data Coverage in Databases with Multiple Relations — Sept. 2019 – July 2020
University of Michigan – Advisor: Prof. H. V. Jagadish, Collaborator: Prof. Abolfazl Asudeh

- *Goal: To provide an efficient approach for database coverage analysis on a set of attributes across multiple tables.*
- Designed an index scheme to avoid explicit table joins, achieve efficient memory usage, and support predicate combinations for aggregate COUNT queries at a high level of parallelism.

- Proposed a priority-based search heuristics to traverse and prune the lattice space of all possible value combinations.
- Presented approximate query processing methods to further reduce the computation time.

Scalable R-Tree based Indexing for Server-Centric Cloud Storage Systems Dec. 2016 – Feb. 2018
Shanghai Jiao Tong University – Advisor: Prof. Xiaofeng Gao

- *Goal: To propose a scalable R-Tree based indexing scheme for high dimensional data in data centers.*
- Utilized R-Tree to support point, range query and used Bloom filter to reduce the false positives.
- Formulated a general definition for server-centric data center topologies and employed the two-layer indexing framework to maintain a global index layer above the structured overlay.
- Validated the indexing scheme in up to 64 instances and three different data center topologies.

INTERNSHIPS

University of Waterloo,
Research Intern in Software Architecture Group **(Advisor: Prof. Meiyappan Nagappan)** July 2018 – Oct. 2018

- Analyzed coding tools proposed in ICSE 2014-2018. Defined a criterion to classify the tools by their functions and developing scenarios, providing keyword search support for the tools in our tool repository.
- Conducted an A/B test and built a survey website to investigate the optimal mobile ads usage pattern.

TEACHING EXPERIENCES

CS499, Mathematical Foundations of Computer Science, SJTU Spring 2018
Teaching Assistant. *Instructor: Prof. Dominik Scheder*

STUDENT MENTORING

Yoko Nagafuchi, Senior, University of Michigan

HONORS & AWARDS

Rackham Dean's and Named PhD fellowship *Full first-year PhD fellowship from the University of Michigan* 2019-2020
Outstanding Undergraduate in Shanghai Jiao Tong University June 2019
Academic Scholarship *Awarded to top 10% undergraduates for academic performance at SJTU* 2016 – 2018
SCSK Scholarship *Awarded to 7 computer science undergraduates at SJTU for the academic performance* 2018
Yitu Scholarship *Awarded to 3 outstanding computer science undergraduates at SJTU for their research* 2017
Chun Tsung Scholar *Awarded to 50 undergraduates at SJTU, funded by Nobel Prize owner Tsung-Dao Lee* 2016